## Claims

1. A microarray comprising at least two nuclear encoded mitochondrial energy metabolism nucleic acid molecules, or fragments thereof, bound to a solid support, wherein at least 90% of the nucleic acid molecules on said support are mitochondrial energy metabolism nucleic acid molecules.

2. The microarray of claim 1, wherein said array comprises nuclear encoded mitochondrial energy metabolism nucleic acid molecules, or fragments thereof, selected from the group consisting of an ATP synthase (mitochondrial F0 complex, subunit c, isoform 3), VDAC1 pseudogene (porin protein, isoform 1), ubiquinone-binding protein, ATP synthase (mitochondrial F0 complex, subunit d), mitochondrial ribosomal protein L3, cytochrome c oxidase subunit VIIb, ATP synthase (mitochondrial F0 complex, subunit f, isoform 2), dynamin 1-like protein, voltage-dependent anion channel 2 (porin), Cytochrome c oxidase subunit VIIa polypeptide 2 (liver), ATP synthase (mitochondrial F1 complex, O subunit), voltage-dependent anion channel 1 (porin), single-stranded DNA binding protein, fumarate hydratase, solute carrier family 25 (member 4), ATP synthase (mitochondrial F1 complex gamma polypeptide 1), NADH dehydrogenase ((ubiquinone) 1 alpha/beta subcomplex 1, 8kDa), and 3-oxoacid CoA transferase nucleic acid molecules.

3. A microarray comprising at least two nuclear encoded mitochondrial energy metabolism polypeptides, or fragments thereof, bound to a solid support, wherein at least 90% of the polypeptides on said support are nuclear encoded mitochondrial energy metabolism polypeptides.

4. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression of a nuclear encoded mitochondrial energy metabolism nucleic acid molecule in a patient sample, wherein a decreased level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

5. The method of claim 4, wherein said patient sample is a blood sample.

6. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression of a nuclear encoded mitochondrial energy metabolism polypeptide in a patient sample, wherein a decreased level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

7. The method of claim 6, wherein said patient sample is a blood sample.

8. A method of monitoring a patient having a bipolar disorder, said method comprising determining the level of expression of a nuclear encoded mitochondrial energy metabolism nucleic acid or polypeptide in a patient sample, wherein an alteration in the level of expression relative to the level of expression in a control sample indicates the severity of bipolar disorder in said patient.

9. The method of claim 8, wherein said patient sample is a blood sample.

10. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising contacting a cell that expresses a nuclear encoded mitochondrial energy metabolism nucleic acid molecule with a candidate compound, and

comparing the level of expression of said nucleic acid molecule in said cell contacted by said candidate compound with the level of expression in a control cell not contacted by said candidate compound, wherein an increase in expression of said nuclear encoded mitochondrial energy metabolism nucleic acid molecule identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

11. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising contacting a cell that expresses a nuclear encoded mitochondrial energy metabolism polypeptide with a candidate compound, and comparing the level of expression of said polypeptide in said cell contacted by said candidate compound with the level of polypeptide expression in a control cell not contacted by said candidate compound, wherein an increase in the expression of said nuclear encoded mitochondrial energy metabolism polypeptide identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

12. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising contacting a cell that expresses a nuclear encoded mitochondrial energy metabolism polypeptide with a candidate compound, and comparing the biological activity of said polypeptide in said cell contacted by said candidate compound with the level of biological activity in a control cell not contacted by said candidate compound, wherein an increase in the biological activity of said nuclear encoded mitochondrial energy metabolism polypeptide identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

13. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising

a) contacting a cell with a candidate compound;

b) obtaining a nucleic acid from said cell;

c) contacting a microarray of claim 1 with said nucleic acid; and

d) detecting an increase in expression level of a nuclear encoded mitochondrial energy metabolism nucleic acid molecule in said cell contacted with said candidate compound compared to a control cell, wherein said increase identifies the candidate compound as a candidate compound that ameliorates a bipolar disorder.

14. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising the steps of

a) contacting a microarray of claim 3 with a candidate compound; and

b) detecting binding of said candidate compound to a nuclear encoded mitochondrial energy metabolism polypeptide, wherein said binding identifies the compound as a candidate compound that ameliorates a bipolar disorder.

15. A microarray comprising at least two nucleic acid molecules, or fragments thereof, bound to a solid support, wherein at least 90% of the nucleic acids molecules on the support encode a proteasomal polypeptide.

16. The microarray of claim 15, wherein said nucleic acid molecules, or fragments thereof, are selected from the group consisting of a Sec61 gamma, protein-L-isoaspartate (D-aspartate) O-methyltransferase, F-box only protein 9, and proteasome subunit z nucleic acid molecule.

17. A microarray comprising at least two proteasomal polypeptides, or fragments thereof, bound to a solid support, wherein at least 90% of the polypeptides on the support are proteasomal polypeptides.

18. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression

of a nucleic acid that encodes a proteasomal polypeptide in a patient sample, wherein a decreased level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

19. The method of claim 18, wherein said patient sample is a blood sample.

20. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression of a proteasomal polypeptide in a patient sample, wherein a decreased level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

21. The method of claim 20, wherein said patient sample is a blood sample.

22. A method of monitoring a patient having a bipolar disorder, said method comprising determining the level of expression of a proteasomal nucleic acid molecule or polypeptide in a patient sample, wherein an alteration in the level of expression relative to the level of expression in a control sample indicates the severity of a bipolar disorder in said patient.

23. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising contacting a cell that expresses a nucleic acid molecule encoding a proteasomal polypeptide with a candidate compound, and comparing the level of expression of said nucleic acid molecule in said cell contacted by said candidate compound with the level of expression in a control cell not contacted by said candidate compound, wherein an increase in expression of said nucleic acid molecule encoding a proteasomal polypeptide identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

24. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising contacting a cell that expresses a proteasomal polypeptide with a candidate compound, and comparing the level of expression of said polypeptide in said cell contacted by said candidate compound with the level of polypeptide expression in a control cell not contacted by said candidate compound, wherein an increase in the expression of a proteasomal polypeptide identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

25. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising

a) contacting a cell with a candidate compound;

b) obtaining a nucleic acid from said cell;

c) contacting a microarray of claim 15 with said nucleic acid; and

d) detecting an increase in expression level of a nucleic acid molecule encoding a proteasomal polypeptide in said cell contacted with said candidate compound compared to a control cell, wherein said increase identifies the candidate compound as a candidate compound that ameliorates a bipolar disorder.

26. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising the steps of

a) contacting a microarray of claim 17 with a candidate compound; and

b) detecting binding of said candidate compound to a proteasomal polypeptide, wherein said binding identifies the compound as a candidate compound that ameliorates a bipolar disorder.

27. A microarray comprising at least two nucleic acid molecules listed in Table 4, or fragments thereof, bound to a solid support, wherein at least 90% of the nucleic acids on said support are listed in Table 4.

28. A microarray comprising at least two polypeptides listed in Table 4, or fragments thereof, bound to a solid support, wherein at least 90% of the polypeptides on said support are polypeptides listed in Table 4.

29. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression of a nucleic acid listed in Table 4 in a patient sample, wherein an alteration in the level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

30. The method of claim 29, wherein said patient sample is a blood sample.

31. A method of diagnosing a patient having, or having a propensity to develop, a bipolar disorder, said method comprising determining the level of expression of a polypeptide encoded by a nucleic acid listed in Table 4 in a patient sample, wherein an altered level of expression relative to the level of expression in a control sample, indicates that said patient has or has a propensity to develop a bipolar disorder.

32. The method of claim 31, wherein said patient sample is a blood sample.

33. A method of monitoring a patient having a bipolar disorder, said method comprising determining the level of expression of a nucleic acid or polypeptide listed in Table 4 in a patient sample, wherein an alteration in the level of expression relative to the

level of expression in a control sample indicates the severity of a bipolar disorder in said patient.

34. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising contacting a cell that expresses a nucleic acid molecule listed in Table 4 with a candidate compound, and comparing the level of expression of said nucleic acid molecule in said cell contacted by said candidate compound with the level of expression in a control cell not contacted by said candidate compound, wherein an alteration in expression of said nucleic acid molecule identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

35. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising contacting a cell that expresses a polypeptide encoded by a nucleic acid molecule listed in Table 4 with a candidate compound, and comparing the level of expression of said polypeptide in said cell contacted by said candidate compound with the level of polypeptide expression in a control cell not contacted by said candidate compound, wherein an alteration in the expression of a polypeptide encoded by a nucleic acid molecule listed in Table 4 identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

36. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising contacting a cell that expresses a polypeptide encoded by a nucleic acid molecule listed in Table 4 with a candidate compound, and comparing the biological activity of said polypeptide in said cell contacted by said candidate compound with the level of biological activity in a control cell not contacted by said candidate compound, wherein an alteration in the biological activity of said polypeptide identifies said candidate compound as a candidate compound that ameliorates a bipolar disorder.

37. A method of identifying a candidate compound that ameliorates a bipolar disorder, said method comprising

a) contacting a cell with a candidate compound;

b) obtaining a nucleic acid from said cell;

c) contacting a microarray of claim 27 with said nucleic acid; and

d) detecting an alteration in expression level of a nucleic acid molecule listed in Table 4 in said cell contacted with said candidate compound compared to a control cell, wherein said alteration identifies the candidate compound as a candidate compound that ameliorates a bipolar disorder.

38. A method of identifying a candidate compound that ameliorates a bipolar disorder, the method comprising the steps of

a) contacting a microarray of claim 28 with a candidate compound; and

b) detecting binding of said candidate compound to a proteasomal polypeptide, wherein said binding identifies the compound as a candidate compound that ameliorates a bipolar disorder.